

WHAT IS CLAIMED IS:

1. A work station for simultaneously performing multiple assays, said work station comprising:

(a) a receptacle holding structure constructed and arranged to hold a plurality of receptacles;

(b) a substance transfer device constructed and arranged to operatively interact with a first set of two or more of the plurality of receptacles held in said receptacle holding structure to simultaneously dispense substance into each of the two or more receptacles of the first set and to operatively interact with a second set of two or more of the plurality of receptacles held in said receptacle holding structure to simultaneously remove substance from each of the two or more receptacles of the second set, wherein said substance transfer device is constructed and arranged to simultaneously remove substance from each of the two or more receptacles of the second set at about the same time that said substance transfer device is simultaneously dispensing substance into each of the two or more receptacles of the first set; and

(c) substance transfer device positioning structure associated with said receptacle holding structure and constructed and arranged to permit said substance transfer device to be positioned with respect to said receptacle holding structure to allow said substance transfer device to:

(i) simultaneously dispense substance into each of the two or more receptacles of the first set,

(ii) simultaneously remove substance from each of the two or more receptacles of the second set, or

(iii) simultaneously dispense substance into each of the two or more receptacles of the first set and simultaneously remove substance from each of the two or more receptacles of the second set at about the same time that said substance transfer device is simultaneously dispensing substance into each of the two or more receptacles of the first set.

2. A work station for simultaneously performing multiple assays, said work station comprising:

(a) a receptacle holding structure constructed and arranged to hold a plurality of receptacles;

5 (b) a substance transfer device constructed and arranged to operatively interact with a
6 first set of two or more of the plurality of receptacles held in said receptacle holding structure to
7 simultaneously dispense substance into each of the two or more receptacles of the first set and to
8 operatively interact with a second set of two or more of the plurality of receptacles held in said
9 receptacle holding structure to simultaneously remove substance from each of the two or more
10 receptacles of the second set, wherein said substance transfer device is constructed and arranged
11 to simultaneously remove substance from each of the two or more receptacles of the second set
12 at about the same time that said substance transfer device is simultaneously dispensing substance
13 into each of the two or more receptacles of the first set;

14 (c) a contamination limiting element holding structure for removably holding a
15 plurality of contamination limiting elements which are operatively engageable by said substance
16 transfer device to limit contact between said substance transfer device and a potentially
17 contaminating substance dispensed by said substance transfer device into the two or more
18 receptacles or between said substance transfer device and a potentially contaminating substance
19 removed by said substance transfer device from the two or more receptacles, said contamination
20 limiting element holding structure being constructed and arranged to:

21 (i) receive and removably hold the plurality of contamination limiting
22 elements in an operative orientation in which the contamination limiting elements can be
23 operatively engaged by said substance transfer device, and

24 (ii) allow said substance transfer device to simultaneously engage two or
25 more of the plurality of contamination limiting elements and allow the two or more
26 contamination limiting elements engaged by said substance transfer device to be removed
27 from said contamination limiting element holding structure; and

28 (d) a substance transfer device positioning structure associated with said receptacle
29 holding structure and said contamination limiting element holding structure and constructed and
30 arranged to:

31 (i) permit said substance transfer device to be positioned with respect to said
32 contamination limiting element holding structure to allow said substance transfer device
33 to operatively engage the two or more contamination limiting elements, and

34 (ii) to permit said substance transfer device to be positioned with respect to
35 said receptacle holding structure to allow said substance transfer device to:

36 (1) simultaneously dispense substance into each of the two or more
37 receptacles of the first set,
38 (2) simultaneously remove substance from each of the two or more
39 receptacles of the second set, or
40 (3) simultaneously dispense substance into each of the two or more
41 receptacles of the first set and simultaneously remove substance from each of the
42 two or more receptacles of the second set at about the same time that said
43 substance transfer device is simultaneously dispensing substance into each of the
44 two or more receptacles of the first set.

1 3. The work station of claim 2, further comprising a plurality of contamination
2 limiting elements removably held by said contamination limiting element holding structure.

1 4. The work station of claim 2, further comprising a plurality of receptacles held by
2 said receptacle holding structure.

1 5. The work station of claim 2, said contamination limiting element holding
2 structure comprising one or more cassettes for holding a plurality of contamination limiting
3 elements, each said cassette comprising:

4 side walls which are spaced apart and generally parallel to one another;
5 end walls which are opposed to one another and extend between said side walls at
6 opposite ends thereof; and

7 a top panel having a plurality of apertures for receiving a plurality of contamination
8 limiting elements formed therein, each said aperture adapted receive one of the plurality of
9 contamination limiting elements.

1 6. The work station of claim 5, wherein each said cassette further comprises a
2 plurality of dividing walls which are spaced apart and extend between said side walls and, in
3 combination with said side walls and said end walls, define a plurality of contamination limiting
4 element compartments, wherein each said compartment is capable of housing one of the
5 contamination limiting elements.

1 7. The work station of claim 6, further comprising a plurality of contamination
2 limiting elements, each of said plurality of contamination limiting elements being housed in an
3 associated one of said plurality of contamination limiting element compartments.

1 8. The work station of claim 2, said contamination limiting element holding
2 structure comprising one or more cassettes for holding a plurality of contamination limiting
3 elements, each said cassette comprising:

4 a plurality of contamination limiting element-receiving tubes, each of said tubes having a
5 channel formed therein for receiving a contamination limiting element and an opening for
6 providing access to said channel;

7 a connecting structure holding said tubes together as an integral unit; and
8 a frustoconical surface surrounding said opening for facilitating alignment of a
9 contamination limiting element with said opening.

1 9. The work station of claim 2, wherein said receptacle holding structure, said
2 contamination limiting element holding structure, and said substance transfer device positioning
3 structure are all operatively disposed on a base structure.

1 10. The work station of claim 2, wherein said receptacle holding structure comprises
2 a receptacle rack for holding a plurality of receptacles arranged in an array.

1 11. The work station of claim 10, further comprising a base structure, said base
2 structure including a receptacle rack well formed in said base structure, wherein said receptacle
3 rack is constructed and arranged to be removably disposed within said receptacle rack well.

1 12. The work station of claim 11, wherein said receptacle holding structure further
2 comprises one or more removable receptacle holding panels having a plurality of receptacle
3 receiving apertures formed therein, said one or more removable receptacle holding panels being
4 removably attachable to said receptacle rack for providing insert apertures by which each of the
5 receptacles is inserted into said receptacle rack.

1 13. The work station of claim 2, wherein said contamination limiting element holding
2 structure comprises a pipette rack for holding a plurality of pipettes arranged in an array.

1 14. The work station of claim 13, wherein said pipette rack comprises a top panel and
2 upstanding sidewall structures supporting said top panel, said top panel having formed therein a
3 plurality of slot arranged generally in parallel with one another, and wherein said contamination
4 limiting element holding structure further comprises one or more cassettes for holding a plurality
5 of contamination limiting elements, each of said one or more cassettes being constructed and
6 arranged to be operatively positioned in an associated one of said slots formed in said top panel.

1 15. The work station of claim 13, further comprising a base structure, said base
2 structure including a pipette rack well formed in said base structure, said pipette rack being
3 constructed and arranged to be removably disposed within said pipette rack well.

1 16. The work station of claim 2, wherein said substance transfer device comprises:

2 (a) an elongated central support member;
3 (b) a pair of upstanding handle members attached to and extending upwardly from
4 said central support member proximate opposite ends thereof;
5 (c) a substance dispensing apparatus operatively mounted to said central support
6 member and including two or more conduits, said substance dispensing apparatus being
7 constructed and arranged to simultaneously dispense substance from each of said two or more
8 conduits of said substance dispensing apparatus into each of the two or more receptacles of the
9 first set; and

10 (d) a substance removing apparatus operatively mounted to said central support
11 member and including two or more conduits, said substance removing apparatus being
12 constructed and arranged to simultaneously remove substance through each of said conduits of
13 said substance removing apparatus from each of the two or more receptacles of the second set,
14 wherein said substance removing apparatus is constructed and arranged to remove substance
15 from each of the two or more receptacles of the second set at about the same time said substance
16 dispensing apparatus is dispensing substance into each of the two or more receptacles of the first
17 set.

1 17. The work station of claim 16, wherein said substance dispensing apparatus
2 comprises a dispenser manifold defining a central conduit and two or more branch conduits
3 extending from said central conduit, said central conduit of said dispenser manifold being
4 connected to a source of substance to be dispensed into the receptacles, and, wherein said
5 substance removing apparatus comprises an aspirator manifold defining a central conduit and
6 two or more branch conduits extending from said central conduit through which substances are
7 removed from the receptacles by aspiration, said central conduit of said aspirator manifold being
8 connected to a container for storing substances aspirated from the receptacles.

1 18. The work station of claim 2, wherein said substance transfer device positioning
2 structure comprises:
3 a receptacle registration structure disposed proximate said receptacle holding structure;
4 and
5 a contamination limiting element registration structure disposed proximate said
6 contamination limiting element holding structure,
7 and, wherein said substance transfer device includes a transfer registration structure
8 constructed and arranged to be selectively engaged with either said receptacle registration
9 structure or said contamination limiting element registration structure,
10 wherein said transfer registration structure is constructed and arranged to position said
11 substance transfer device with respect to said contamination limiting element holding structure,
12 when said transfer registration structure is engaged with said contamination limiting element
13 registration structure, to allow said substance transfer device to operatively engage the two or
14 more contamination limiting elements,
15 and, wherein said transfer registration structure is constructed and arranged to position
16 said substance transfer device with respect to said receptacle holding structure when said transfer
17 registration structure is engaged with said receptacle registration structure to allow said
18 substance transfer device to:
19 (i) simultaneously dispense substance into each of the two or more
20 receptacles of the first set,
21 (ii) simultaneously remove substance from each of the two or more
22 receptacles of the second set, or

23 (iii) simultaneously dispense substance into each of the two or more
24 receptacles of the first set and simultaneously remove substance from each of the two or
25 more receptacles of the second set at about the same time that said substance transfer
26 device is simultaneously dispensing substance into each of the two or more receptacles of
27 the first set.

1 19. The work station of claim 18,
2 wherein said receptacle registration structure comprises a pair of elongated guide
3 supports, one of said elongated guide supports being positioned on either side of said receptacle
4 holding structure, each of said elongated guide supports having a plurality of aligned, vertically
5 extending guide holes formed therein, each of said guide holes of one of said pair of elongated
6 guide supports being aligned with a corresponding guide hole of the other of said elongated
7 guide supports,
8 wherein said contamination limiting element registration structure comprises a pair of
9 elongated guide supports, one of said elongated guide supports being positioned on either side of
10 said contamination limiting element holding structure, each of said elongated guide supports
11 having a plurality of aligned, vertically extending guide holes formed therein, each of said guide
12 holes of one of said pair of elongated guide supports being aligned with a corresponding guide
13 hole of the other of said elongated guide support, and
14 wherein said transfer registration structure comprises a pair of spaced, generally parallel
15 guide rods extending from said substance transfer device,
16 wherein one of said guide rods of said transfer registration structure is constructed and
17 arranged to be inserted into a one of said guide holes of one of said elongated guide supports of
18 said contamination limiting element registration structure and the other of said guide rods of said
19 transfer registration structure is constructed and arranged to be inserted into said corresponding
20 aligned guide hole of the other of said elongated guide supports of said contamination limiting
21 element registration structure to position said substance transfer device with respect to said
22 contamination limiting element holding structure to allow said substance transfer device to
23 operatively engage the two or more contamination limiting elements, and
24 wherein one of said guide rods of said transfer registration structure is constructed and
25 arranged to be inserted into a one of said guide holes of one of said elongated guide supports of
26 said receptacle registration structure and the other of said guide rods of said transfer registration

structure is constructed and arranged to be inserted into said corresponding guide hole of the other of said elongated guide supports of said receptacle registration structure to position said substance transfer device with respect to said receptacle holding structure to allow said substance transfer device to:

(i) simultaneously dispense substance into each of the two or more receptacles of the first set,

(ii) simultaneously remove substance from each of the two or more receptacles of the second set, or

(iii) simultaneously dispense substance into each of the two or more receptacles of the first set and simultaneously remove substance from each of the two or more receptacles of the second set at about the same time that said substance transfer device is simultaneously dispensing substance into each of the two or more receptacles of the first set.

20. The work station of claim 11, further comprising a plurality of spaced, substantially parallel dividing walls extending laterally across a bottom portion of said receptacle rack well so as to define a plurality of spaced, laterally extending, substantially parallel receptacle receiving troughs across said bottom portion of said receptacle rack well for receiving therein portions of the plurality of receptacles held in said receptacle rack.

21. The work station of claim 20, further comprising magnetic structures incorporated into or defining said dividing walls to create a magnetic field within said troughs so as to expose any substance contained within the plurality of receptacles received within said receptacle receiving troughs to said magnetic field.

22. A work station for simultaneously performing multiple assays, said work station comprising:

(a) a receptacle holding structure constructed and arranged to hold a plurality of receptacles;

(b) a substance transfer device constructed and arranged to operatively interact with a first set of two or more of the plurality of receptacles held in said receptacle holding structure to simultaneously dispense substance into each of the two or more receptacles of the first set and to

8 operatively interact with a second set of two or more of the plurality of receptacles held in said
9 receptacle holding structure to simultaneously remove substance from each of the two or more
10 receptacles of the second set, wherein said substance transfer device is constructed and arranged
11 to simultaneously remove substance from each of the two or more receptacles of the second set
12 at about the same time that said substance transfer device is simultaneously dispensing substance
13 into each of the two or more receptacles of the first set;

14 (c) a receiving structure for receiving a removable contamination limiting element
15 holding device for removably holding a plurality of contamination limiting elements which are
16 operatively engageable by said substance transfer device to limit contact between said substance
17 transfer device and a potentially contaminating substance dispensed by said substance transfer
18 device into the two or more receptacles of the first set or between said substance transfer device
19 and a potentially contaminating substance removed by said substance transfer device from the
20 two or more receptacles of the second set, said receiving structure being constructed and
21 arranged so that the contamination limiting element holding device held thereby is positioned
22 and oriented to:

23 (i) receive and removably hold a plurality of contamination limiting elements
24 in an operative orientation in which the contamination limiting elements can be
25 operatively engaged by said substance transfer device, and

26 (ii) allow said substance transfer device to simultaneously engage two or
27 more of the plurality of contamination limiting elements and allow the two or more
28 contamination limiting elements engaged by said substance transfer device to be removed
29 from the contamination limiting element holding device; and

30 (d) a substance transfer device positioning structure associated with said receptacle
31 holding structure and said receiving structure and constructed and arranged to:

32 (i) permit said substance transfer device to be positioned with respect to the
33 contamination limiting element holding device operatively held by said receiving
34 structure to allow said substance transfer device to operatively engage the two or more
35 contamination limiting elements, and

36 (ii) permit said substance transfer device to be positioned with respect to said
37 receptacle holding structure to allow said substance transfer device to:

38 (1) simultaneously dispense substance into each of the two or more
39 receptacles of the first set,

40 (2) simultaneously remove substance from each of the two or more
41 receptacles of the second set, or

42 (3) simultaneously dispense substance into each of the two or more
43 receptacles of the first set and simultaneously remove substance from each of the
44 two or more receptacles of the second set at about the same time that said
45 substance transfer device is simultaneously dispensing substance into each of the
46 two or more receptacles of the first set.

1 23. The work station of claim 22, further comprising a removable contamination
2 limiting element holding device operatively held by said receiving structure.

1 24. A work station for simultaneously performing multiple assays, said work station
2 comprising:

3 (a) a receiving structure for receiving a removable receptacle holding device for
4 holding a plurality of receptacles;

5 (b) a substance transfer device constructed and arranged to operatively interact with a
6 first set of two or more of a plurality of receptacles held in a receptacle holding device
7 operatively held by said receiving structure to simultaneously dispense substance into each of the
8 two or more receptacles of the first set and to operatively interact with a second set of two or
9 more of the plurality of receptacles held in the receptacle holding device to simultaneously
10 remove substance from each of the two or more receptacles of the second set, wherein said
11 substance transfer device is constructed and arranged to simultaneously remove substance from
12 each of the two or more receptacles of the second set at about the same time that said substance
13 transfer device is simultaneously dispensing substance into each of the two or more receptacles
14 of the first set;

15 (c) a contamination limiting element holding structure for removably holding a
16 plurality of contamination limiting elements which are operatively engageable by said substance
17 transfer device to limit contact between said substance transfer device and a potentially
18 contaminating substance removed by said substance transfer device from the two or more
19 receptacles of the second set, said contamination limiting element holding structure being
20 constructed and arranged to:

21 (i) receive and removably hold the plurality of contamination limiting
22 elements in an operative orientation in which the contamination limiting elements can be
23 operatively engaged by said substance transfer device, and
24 (ii) allow said substance transfer device to simultaneously engage two or
25 more of the plurality of contamination limiting elements and allow the two or more
26 contamination limiting elements engaged by said substance transfer device to be removed
27 from said contamination limiting element holding structure; and
28 (d) a substance transfer device positioning structure associated with said receiving
29 structure and said contamination limiting element holding structure and constructed and
30 arranged to:
31 (i) permit said substance transfer device to be positioned with respect to said
32 contamination limiting element holding structure to allow said substance transfer device
33 to operatively engage the two or more contamination limiting elements, and
34 (ii) permit said substance transfer device to be positioned with respect to the
35 receptacle holding device operatively held by said receiving structure to allow said
36 substance transfer device to:
37 (1) simultaneously dispense substance into each of the two or more
38 receptacles of the first set,
39 (2) simultaneously remove substance from each of the two or more
40 receptacles of the second set, or
41 (3) simultaneously dispense substance into each of the two or more
42 receptacles of the first set and simultaneously remove substance from each of the
43 two or more receptacles of the second set at about the same time that said
44 substance transfer device is simultaneously dispensing substance into each of the
45 two or more receptacles of the first set.

1 25. The work station of claim 24, further comprising a removable receptacle holding
2 device operatively held by said receiving structure.

1 26. A work station for simultaneously performing multiple assays, said work station
2 comprising:

3 (a) a first receiving structure adapted to receive and carry a receptacle holding
4 structure for holding a plurality of receptacles, said first receiving structure being constructed
5 and arranged to position a receptacle holding structure carried thereby so that receptacles held by
6 the receptacle holding structure are arranged and oriented to be engageable by a substance
7 transfer device for dispensing substances into or removing substances from two or more of the
8 receptacles simultaneously;

9 (b) a second receiving structure adapted to receive and carry a contamination limiting
10 element holding structure for removably holding a plurality of contamination limiting elements
11 which are operatively engageable by a substance transfer device to limit contact between the
12 substance transfer device and a potentially contaminating substance removed by the substance
13 transfer device from two or more receptacles, said second receiving structure being constructed
14 and arranged to position a contamination limiting element holding structure carried thereby so
15 that contamination limiting elements held by the contamination limiting element holding
16 structure are positioned and oriented to permit a substance transfer device to operatively engage
17 two or more of the contamination limiting elements simultaneously and remove the two or more
18 contamination limiting elements from the contamination limiting element holding structure; and

19 (c) a substance transfer device positioning structure associated with said first and
20 second receiving structures and constructed and arranged to:

21 (i) permit a substance transfer device to be positioned with respect to a
22 contamination limiting element holding structure carried by said second receiving
23 structure to allow the substance transfer device to simultaneously engage two or more
24 contamination limiting elements held by the contamination limiting element holding
25 structure, and

26 (ii) permit a substance transfer device to be positioned with respect to a
27 receptacle holding structure carried by said first receiving structure to allow the substance
28 transfer device to simultaneously dispense substances into or simultaneously remove
29 substances from two or more receptacles held by the receptacle holding structure.

1 27. The work station of claim 26, further comprising:
2 a receptacle holding structure carried by said first receiving structure, said receptacle
3 holding structure being constructed and arranged to hold a plurality of receptacles and to arrange
4 and orient the receptacles so as to be engageable by a substance transfer device for dispensing
5 substances into or removing substances from two or more of the receptacles simultaneously; and
6 a contamination limiting element holding structure carried by said second receiving
7 structure, said contamination limiting element holding structure being constructed and arranged
8 to removably hold a plurality of contamination limiting elements which are operatively
9 engageable by a substance transfer device to limit contact between the substance transfer device
10 and a potentially contaminating substance removed by the substance transfer device from two or
11 more receptacles, said contamination limiting element holding structure being constructed and
12 arranged to:

- 13 (i) receive and removably hold a plurality of contamination limiting elements
14 in an operative orientation in which the contamination limiting elements can be
15 operatively engaged by a substance transfer device, and
16 (ii) allow a substance transfer device to simultaneously engage two or more of
17 the plurality of contamination limiting elements and allow the two or more
18 contamination limiting elements engaged by the substance transfer device to be removed
19 from the contamination limiting element holding structure.

1 28. The work station of claim 26, further comprising a substance transfer device
2 constructed and arranged to:

- 3 (a) operatively interact with a first set of two or more of a plurality of receptacles
4 held in a receptacle holding structure carried by said first receiving structure to simultaneously
5 dispense substance into each of the two or more receptacles of the first set and to operatively
6 interact with a second set of two or more of the plurality of receptacles held in the receptacle
7 holding structure to simultaneously remove substance from each of the two or more receptacles
8 of the second set, wherein said substance transfer device is constructed and arranged to
9 simultaneously remove substance from each of the two or more receptacles of the second set at
10 about the same time that said substance transfer device simultaneously dispenses substance into
11 each of the two or more receptacles of the first set, and

12 (b) operatively engage two or more of a plurality of contamination limiting elements
13 held by a contamination limiting element holding structure carried by said second receiving
14 structure and to remove the two or more contamination limiting elements from the
15 contamination limiting element holding structure,

16 said substance transfer device including guide members constructed and arranged to
17 cooperate with said substance transfer device positioning structure to position said substance
18 transfer device with respect to a contamination limiting element holding structure carried by said
19 second receiving structure to allow said substance transfer device to operatively engage two or
20 more contamination limiting elements held by the contamination limiting element holding
21 structure, or to position said substance transfer device with respect to a receptacle holding
22 structure carried by said first receiving structure to allow said substance transfer device to:

23 (i) simultaneously dispense substance into each of a first set of two or more
24 receptacles held by the receptacle holding structure,

25 (ii) simultaneously remove substance from each of a second set of two or
26 more receptacles held by the receptacle holding structure, or

27 (iii) simultaneously dispense substance into each of a first set of two or more
28 receptacles held by the receptacle holding structure and simultaneously remove substance
29 from each of a second set of two or more receptacles held by the receptacle holding
30 structure at about the same time that said substance transfer device is simultaneously
31 dispensing substance into each of the two or more receptacles of the first set.

1 29. The work station of claim 26, further comprising a substance transfer device
2 constructed and arranged to:

3 (a) operatively interact with two or more of a plurality of receptacles held in a
4 receptacle holding structure carried by said first receiving structure to simultaneously dispense
5 substance into each of the two or more receptacles or to operatively interact with two or more of
6 the plurality of receptacles held in the receptacle holding structure to simultaneously remove
7 substance from each of the two or more receptacles, and

8 (b) operatively engage two or more of a plurality of contamination limiting elements
9 held by a contamination limiting element holding structure carried by said second receiving
10 structure and to remove the two or more contamination limiting elements from the
11 contamination limiting element holding structure,

12 said substance transfer device including guide members constructed and arranged to
13 cooperate with said substance transfer device positioning structure to position said substance
14 transfer device with respect to a contamination limiting element holding structure carried by said
15 second receiving structure to allow said substance transfer device to operatively engage two or
16 more contamination limiting elements held by the contamination limiting element holding
17 structure, or to position said substance transfer device with respect to a receptacle holding
18 structure carried by said first receiving structure to allow said substance transfer device to:

19 (i) simultaneously dispense substance into each of two or more receptacles
20 held by the receptacle holding structure, or

21 (ii) simultaneously remove substance from each of two or more receptacles
22 held by the receptacle holding structure.

30. The work station of claim 26, further comprising:
a first substance transfer device constructed and arranged to operatively interact with two
or more of a plurality of receptacles held in a receptacle holding structure carried by said first
receiving structure to simultaneously dispense substance into each of the two or more
receptacles,

said first substance transfer device including guide members constructed and
arranged to cooperate with said substance transfer device positioning structure to position
said first substance transfer device with respect to a receptacle holding structure carried
by said first receiving structure to allow said substance transfer device to simultaneously
dispense substance into each of two or more receptacles held by the receptacle holding
structure; and

a second substance transfer device constructed and arranged to operatively engage two or
more of a plurality of contamination limiting elements held by a contamination limiting element
holding structure carried by said second receiving structure and to remove the two or more
contamination limiting elements from the contamination limiting element holding structure and
to operatively interact with two or more of a plurality of receptacles held in a receptacle holding
structure carried by said first receiving structure to simultaneously remove substance from each
of the two or more receptacles,

said second substance transfer device including guide members constructed and
arranged to cooperate with said substance transfer device positioning structure to position

21 said substance transfer device with respect to a contamination limiting element holding
22 structure carried by said second receiving structure to allow said substance transfer
23 device to operatively engage two or more contamination limiting elements held by the
24 contamination limiting element holding structure or to position said substance transfer
25 device with respect to a receptacle holding structure carried by said first receiving
26 structure to allow said substance transfer device to simultaneously remove substance
27 from each of two or more receptacles held by the receptacle holding structure.

1 31. The work station of claim 27, further comprising a substance transfer device
2 constructed and arranged to:

3 (a) operatively interact with a first set of two or more of a plurality of receptacles
4 held in said receptacle holding structure to simultaneously dispense substance into each of the
5 two or more receptacles of the first set and to operatively interact with a second set of two or
6 more of the plurality of receptacles held in said receptacle holding structure to simultaneously
7 remove substance from each of the two or more receptacles of the second set, wherein said
8 substance transfer device is constructed and arranged to simultaneously remove substance from
9 each of the two or more receptacles of the second set at about the same time that said substance
10 transfer device simultaneously dispenses substance into each of the two or more receptacles of
11 the first set, and

12 (b) operatively engage two or more of a plurality of contamination limiting elements
13 held by said contamination limiting element holding structure and to remove the two or more
14 contamination limiting elements from the contamination limiting element holding structure,

15 said substance transfer device including guide members constructed and arranged to
16 cooperate with said substance transfer device positioning structure to position said substance
17 transfer device with respect to said contamination limiting element holding structure to allow
18 said substance transfer device to operatively engage two or more contamination limiting
19 elements held by said contamination limiting element holding structure or to position said
20 substance transfer device with respect to said receptacle holding structure to allow said
21 substance transfer device to:

22 (i) simultaneously dispense substance into each of a first set of two or more
23 receptacles held by said receptacle holding structure,

24 (ii) simultaneously remove substance from each of a second set of two or
25 more receptacles held by said receptacle holding structure, or
26 (iii) simultaneously dispense substance into each of a first set of two or more
27 receptacles held by said receptacle holding structure and simultaneously remove
28 substance from each of a second set of two or more receptacles held by said receptacle
29 holding structure at about the same time that said substance transfer device is
30 simultaneously dispensing substance into each of the two or more receptacles of the first
31 set.

1 32. The work station of claim 27, further comprising a substance transfer device
2 constructed and arranged to:

3 (a) operatively interact with two or more of a plurality of receptacles held in said
4 receptacle holding structure to simultaneously dispense substance into each of the two or more
5 receptacles or to operatively interact with two or more of the plurality of receptacles held in said
6 receptacle holding structure to simultaneously remove substance from each of the two or more
7 receptacles, and

8 (b) operatively engage two or more of a plurality of contamination limiting elements
9 held by said contamination limiting element holding structure and to remove the two or more
10 contamination limiting elements from said contamination limiting element holding structure,
11 said substance transfer device including guide members constructed and arranged to
12 cooperate with said substance transfer device positioning structure to position said substance
13 transfer device with respect to said contamination limiting element holding structure to allow
14 said substance transfer device to operatively engage two or more contamination limiting
15 elements held by said contamination limiting element holding structure or to position said
16 substance transfer device with respect to said receptacle holding structure to allow said
17 substance transfer device to:

18 (i) simultaneously dispense substance into each of two or more receptacles
19 held by said receptacle holding structure, or

20 (ii) simultaneously remove substance from each of two or more receptacles
21 held by said receptacle holding structure.

1 33. The work station of claim 27, further comprising:
2 a first substance transfer device constructed and arranged to operatively interact with two
3 or more of a plurality of receptacles held in said receptacle holding structure to simultaneously
4 dispense substance into each of the two or more receptacles,
5 said first substance transfer device including guide members constructed and
6 arranged to cooperate with said substance transfer device positioning structure to position
7 said first substance transfer device with respect to said receptacle holding structure to
8 allow said substance transfer device to simultaneously dispense substance into each of
9 two or more receptacles held by said receptacle holding structure; and
10 a second substance transfer device constructed and arranged to operatively engage two or
11 more of a plurality of contamination limiting elements held by said contamination limiting
12 element holding structure and to remove the two or more contamination limiting elements from
13 said contamination limiting element holding structure and to operatively interact with two or
14 more of a plurality of receptacles held in said receptacle holding structure to simultaneously
15 remove substance from each of the two or more receptacles,
16 said second substance transfer device including guide members constructed and
17 arranged to cooperate with said substance transfer device positioning structure to position
18 said substance transfer device with respect to said contamination limiting element
19 holding structure to allow said substance transfer device to operatively engage two or
20 more contamination limiting elements held by said contamination limiting element
21 holding structure or to position said substance transfer device with respect to said
22 receptacle holding structure to allow said substance transfer device to simultaneously
23 remove substance from each of two or more receptacles held by said receptacle holding
24 structure.

1 34. A substance transfer device for simultaneously dispensing substances into and
2 removing substances from two or more receptacles, said substance transfer device comprising:
3 (a) a support member;
4 (b) a substance dispensing apparatus operatively mounted to said support member
5 and including two or more conduits, said substance dispensing apparatus being constructed and
6 arranged to simultaneously dispense substance through each of said two or more conduits of said
7 substance dispensing apparatus into each receptacle of a first set of two or more receptacles;

8 (c) a substance removing apparatus operatively mounted to said support member and
9 including two or more conduits, said substance removing structure being constructed and
10 arranged to simultaneously remove substance through each of said conduits of said substance
11 removing apparatus from each receptacle of a second set of two or more receptacles,

12 wherein said substance transfer device is constructed and arranged to remove substance
13 from each of the receptacles of the second set with said substance removing apparatus at about
14 the same time said substance dispensing apparatus is dispensing substance into each of the
15 receptacles of the first set.

Simultaneous

1 35. The substance transfer device of claim 34, further comprising a pair of handle
2 members operatively mounted to said support member to facilitate handling of said substance
3 transfer device by a user.

4 36. The substance transfer device of claim 34, wherein a portion of each of said
5 conduits of said substance removing apparatus defines a contamination limiting element
6 engaging structure constructed and arranged to operatively engage a contamination limiting
7 element for limiting contact between said substance removing apparatus and a potentially
8 contaminating substance removed by said substance removing apparatus from the two or more
9 receptacles of the second set.

1 37. The substance transfer device of claim 36, further comprising a contamination
2 limiting element disengaging structure operatively associated with said substance removing
3 apparatus and constructed and arranged to selectively disengage each of the contamination
4 limiting elements engaged by said contamination limiting element engaging structures.